AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions, and listings, of claims in the application:

Listing of Claims

1-10. (Cancelled).

11. (New) A method, in a transmission unit, for transmitting packet data on at least one shared packet data channel and control data on a control channel, wherein control data for a given transmission interval (t) on the control channel pertains to at least the allocation of data for an associated transmission interval (t) on the shared packet data channel, wherein the transmission interval (t) of the control channel is overlapping the transmission interval (t) of the shared packet data channel, such that a first part of the control data of a present transmission interval of the control channel is transmitted while data may be transmitted on the shared packet data channel according to a previous transmission interval (t-1), and a second part of the control data of the present transmission interval of the control channel is transmitted while packet data is to be transmitted on the shared packet data channel according to the present transmission interval (t), the shared packet data channel and the control channel operating on the same frequency spectrum, the method comprising the steps of:

determining the available power (P_AVLB(t)) for transmission on the control channel and the shared packet data channel;

scheduling data for transmission, determining:

the power level of the shared packet data (P_PDS(t-1) at a previous transmission interval;

the power level of the shared packet data (P_PDS(t)) at the present transmission interval;

the power level of the control channel (P_SC_P1(t)) for the first part of the present transmission interval;

setting the power level of the second part (P_SC_P2(t)) as the power level of the first part (P_SC_P1(t)) adjusted by a function (F) based

on the power level of the shared packet data channel at the present transmission interval (P_PDS(t)) and the previous transmission interval (P_PDS(t-1).

12. (New) The method according to claim 11, wherein the function (F) corresponds to the difference between the power level of the shared packet data channel at the present transmission interval (P_PDS(t)) and the previous transmission interval (P_PDS(t-1).

13. (New) The method according to claim 12, wherein the power level of the second part (P_SC_P2(t)) equals the sum of the power level of the first part (P_SC_P1 (t)) and the function (F).

14. (New) A transmission unit, comprising:

a first unit for receiving scheduled first data for transmission on at least a first channel;

a power control unit for the first channel responsive to a respective closed loop power regulation signal, under which at least the transmit power rate of change is limited to a predetermined value per time unit;

a packet data scheduler for scheduling second data packets for transmission on at least a second channel at an actual power level (P_H(t));

wherein the outputted first and second channels are subject to interference from one another, wherein the transmission unit (BSS) for each scheduling interval of high speed packet data operating the packet data scheduler according to the steps of:

receiving the first scheduled data;

determining a possible power (P_POS(t)) at a given instance as the maximum value of either the actual power (P_HS(t-1)) at a previous instance or the possible power determined at a previous instance (P_POS(t-1)), decreasing the maximum value by a predetermined value (d); and,

determining a permitted power (P_PERM(t)) at a given instance as the maximum value of either the actual power of a previous instance (P_HS(t-1)) added with the predetermined value (d) or the determined possible power (P_POS(t)).

15. (New) The transmission unit according to claim 14, wherein the transmission unit (BSS) for each scheduling interval of high speed packet data operates the high speed packet data scheduler according to the further step of:

depending on the available second data (DATA1) to be transmitted, scheduling the second data (DATA1) at a power level lower or equal to at least the permitted power (P_PERM(t)).

16. (New) The transmission unit according to claim 14, wherein the transmission unit (BSS) for each scheduling interval of high speed packet data operates the high speed packet data scheduler according to the further steps of:

determining a remaining power (P_AVBL(t)) as the total power budget remaining for high speed packet data transmission after scheduling of common and dedicated channels;

determining an available power (P_AVBL(t)) as the minimum value of either the permitted power or the remaining power (P_REM(t)); and,

determining a remaining power (P_AVBL(t)) as the total power budget remaining for high-speed packet data transmission after scheduling of common and dedicated channels.

17. (New) The transmission unit according to claim 16, wherein the transmission unit (BSS) for each scheduling interval of high speed packet data operates the high speed packet data scheduler according to the steps of:

depending on the available second data (DATA1) to be transmitted, scheduling the second data (DATA1) at a power level lower or equal to at least the available power (P_AVBL(t)).

18. (New) The transmission unit according to claim 14, wherein the first and second channels are coded using code division multiplex access (CDMA) coding.

19. (New) The transmission unit according to claim 14, wherein the second data packets (DATA1) are high-speed data rate packets (HSDPA).

20. (New) A method of scheduling and transmitting data packets to user entities wherein channels are subject to interference from one another, comprising the steps of:

receiving first scheduled data pertaining to at least a dedicated channel;

determining a possible power (P_POS(t)) at a given instance as the maximum value of either the actual power (P_HS(t-1)) at a previous instance or the possible power determined at a previous instance (P_POS(t-1)), decreasing the maximum value by a predetermined value (d);

determining a permitted power (P_PERM(t)) at a given instance as the maximum value of either the actual power of a previous instance (P_HS(t-1)) added with the predetermined value (d) or the determined possible power (P_POS(t)); and,

scheduling and transmitting packet data on at least a second channel, whereby the actual power (P_H(t)) is held within at least the permitted power, P_PERM (t).

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